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ABSTRACT

This experiment involved training students in self-instruction (specifically, teaching them to verbally cue and instruct themselves through given assignments), as an alternative to the direct intervention method for increasing on-task behavior and decreasing disruptive behavior in the elementary school classroom. Assignment completion rather than on-task behavior was used as the dependent variable. Three first grade students were taken out of the classroom individually for a 45-minute training session over three consecutive days. A variety of tasks appropriate for the students' grade level were used in training. The 5-step training procedure included modeling and instruction by an instructor as well as overt and covert self-instruction by the subject as he performed each task. Positive reinforcement was used in the classroom following training. Results indicate that self-instruction training sessions can be effective in increasing assignment completion in the elementary school, particularly if the student's baseline performance is low. (CM)

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TEACHING SELF-INSTRUCTION IN THE ELEMENTARY SCHOOLS

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The direct intervention technique, (Patterson, Cobb, & Ray, 1972; Litzenberger & Trusty, 1975) has proven effective with a high percentage of students in increasing on-task behavior and decreasing disruptive behavior in the classroom. However, it has been our experience with some students, the direct intervention technique has not been completely successful in increasing student productivity in the classroom. In addition to these latter students, we are also concerned with the student who may be on-task, that is, oriented towards the work and yet, is unable to properly guide himself through a given assignment.

A self-instruction procedure has been introduced by Meichenbaum and Cameron that can be used as an alternate method to the direct intervention for increasing student on-task behavior in the classroom. Kazdin (1975) proposed training students in self-control (Bolstad & Johnson, 1972; Drabman, Spitalnik & O'Leary, 1973; Michenbaum, 1973). One technique for training students in self-control is cognitive self-instruction, (Meichenbaum and Cameron, 1974). Training a student in self-instruction is an attempt to teach him to verbally cue and instruct himself through a given assignment. Blackwood (1970) contends that, "Traditionally, behavior modification has depended upon direct conditioning while the verbal behavior of children has been ignored unless the verbal behavior itself was the target." Self-instruction training directly focuses on the verbal behavior of children.

Cognitive self-instruction involves fading a set of prompts and instructions from overt external self-control to covert self-control. Results

of studies in this area have indicated that self-instructional guidance programs can effectively modify the behavior of children described as: non attenders, hyperactive, disruptive, aggressive, overactive and staring into space, (Meichenbaum and Goodman, 1971).

A self-instruction program used by Bornstein and Quevillon for pre-school, impulsive children demonstrated that the program was effective in increasing on-task behavior in pre-school boys. The behaviors were maintained for 22.5 weeks after baseline. Positive results such as these have prompted the use of a similar process with students in Project AIMS.*

Method

Subjects and Setting

The three subjects were enrolled in one first grade classroom. Children were selected on the basis of teacher referral as being easily tempted off-task and poor in following directions.

Dependent Variable

Assignment completion was used as the dependent variable rather than on-task behavior. The change was made because while the student may be on-task he might not be following directions or able to properly guide himself through the assignment. Also, a student might be on-task while an observation is made but not continue to stay on-task to complete an assignment. Teachers seem to prefer assignment completion to on-task behavior for this reason. During regular class time we expected our students to be working on completing their assignments. The same subject areas that were counted during baseline were tracked after completion of the self-instruction class. It was required that the student complete the assignment in the same time that the teacher allowed for the rest of the class, in order to count it as a completed assignment.

*Project AIMS is a special project funded by Urban, Rural, Racial, Disadvantaged students in the State of Washington.

Procedure

Each student was taken out of the classroom individually, for a forty-five minute session, over three consecutive days. The instructor presented a task to the student and followed a procedure similar to Meichenbaum and Goodman (1971). Their procedure included six steps: (1) The experimenter modeled the task while talking aloud to himself. (2) The subject performed the task while the experimenter instructed aloud. (3) The subject then performed the task talking aloud to himself while the experimenter whispered softly. (4) The subject performed the task whispering softly while the experimenter made lip movements but no sound. (5) The subject performed the task making lip movements without sound while the experimenter self-instructed covertly, and finally (6) The subject performed the task with covert self-instruction.

It should be noted that in this study, step number five (5) was omitted as the instructor felt it could not be determined if the lip movements were appropriate. Evaluation of step number 5 seemed impossible.

After the six steps were completed, a new task was introduced and the steps began again. To complete the six steps, acceptable responses were those that included four elements: (1) questions about the task (e.g., "What does the teacher want me to do?"), (2) answers to the questions in the form of cognitive rehersal (e.g., "Oh, that's right, I'm supposed to copy that picture."), (3) self-instructions that guide through the task (e.g., "O.K., first I draw a line here..."), and (4) self-reinforcement (e.g., "How about that, I really did that one well."), (Meichenbaum and Goodman, 1971).

A variety of tasks were used, appropriate for the students' grade level. The instructor spent a considerable amount of time talking to

teachers and looking through workbooks in order to compile an appropriate package for the target students. The following were included in this particular package for the first grade level: (1) The rhyming section from the Metropolitan Readiness Test (M.R.T.). (2) The Language and Listening section from the M.R.T. (3) Four math tasks taken from a first grade math workbook, (MacMillan Mathematics © 1976) which included addition and subtraction facts, greater and less than concepts, number sequence, proportions and equal parts. (4) A pasting and cutting exercise using the concepts, beneath, between, on and by, and finally, (5) A printing exercise from the blackboard on "What I like to do best." First grade teachers often give printing assignments daily and consider it an important part of first grade curriculum.

It should be noted that the instructor explained to the student that his classroom teacher has asked that he complete these tasks, (e.g., "Brian, Mrs. Smith wants you to work on this math page now."). The instructor asked the student to imagine he was sitting in his own desk, in the regular classroom. Verbal praise and positive touches (pats on the back) were used to reinforce appropriate responses.

The teacher kept records on how many assignments each student completed each day during baseline (5 days) and during the week of training (4 days). Following the week of training, the instructor introduced a "Daily Accomplishment Sheet" to each student and listed the same subjects on it as those counted during baseline and training. The sheet was taped on the students desk. The instructor explained to the student that if he finished an assignment he could color in a box for that subject, for that day. The teacher was asked to provide reinforcers for the students who completed all their assignments for any given day, (e.g., water drinks without permis-

sion, animal stamps on their daily accomplishment sheet, etc.). The instructor also explained to the student that if he completed all his assignments for the whole week, he would receive a "Super Behavior Award." By doing this the student could be reinforced daily and at the end of the week for good work. The instructor stopped in twice a week at the end of the day to ask the students how they were doing and encourage them to keep up the good work.

Results

Student #1 completed a $\bar{X}$ of 30% of his assignments during baseline, 33% during training week, 64% during the first week after training, and 64% during the second week after training.

Student #2 completed a $\bar{X}$ of 40% of his assignments during baseline, 40% during training week, 72% one week after training and 72% two weeks after training.

Student #3 completed a $\bar{X}$ of 73% during baseline, 72% during the training week, 64% during the week after training and 76% two weeks after the training week.

Insert Table 1 about here

According to Shewart's technique (Gottman & Leiblum, 1974) the improvement of both student #1 and student #2 was statistically significant at the .05 level. The probability of the change in performance for student #3 could not be calculated because the baseline mean was 73% and a two standard deviation band width would be well above the 100% mark. However, in viewing the data, there didn't appear to be a change in student #3's performance.

Discussion

The present study indicates that self-instruction training sessions can be effective in increasing assignment completion in the elementary school, particularly, if the baseline performance is low. Two of the three students' data showed significant improvement. While the third student's data could not be determined using Shewart's technique, it is important to note that the teacher felt this student's baseline was much higher following training.

A valid criticism of Time Series Designs is that something other than the planned intervention may have been responsible for the change. In this particular study, the "Daily Accomplishment Sheet" serving as a reminder, or the additional positive reinforcement may have been enough to motivate the student in increasing assignment completion. It should be no problem, however, to use a Time-Lagged Control Design in a future study to eliminate some of these questions. While improved assignment completion was maintained for two weeks after training, it would be suggested for a future study to collect follow-up data for a longer period of time. The results of the present study are, however, certainly encouraging enough to warrant future study in this area.

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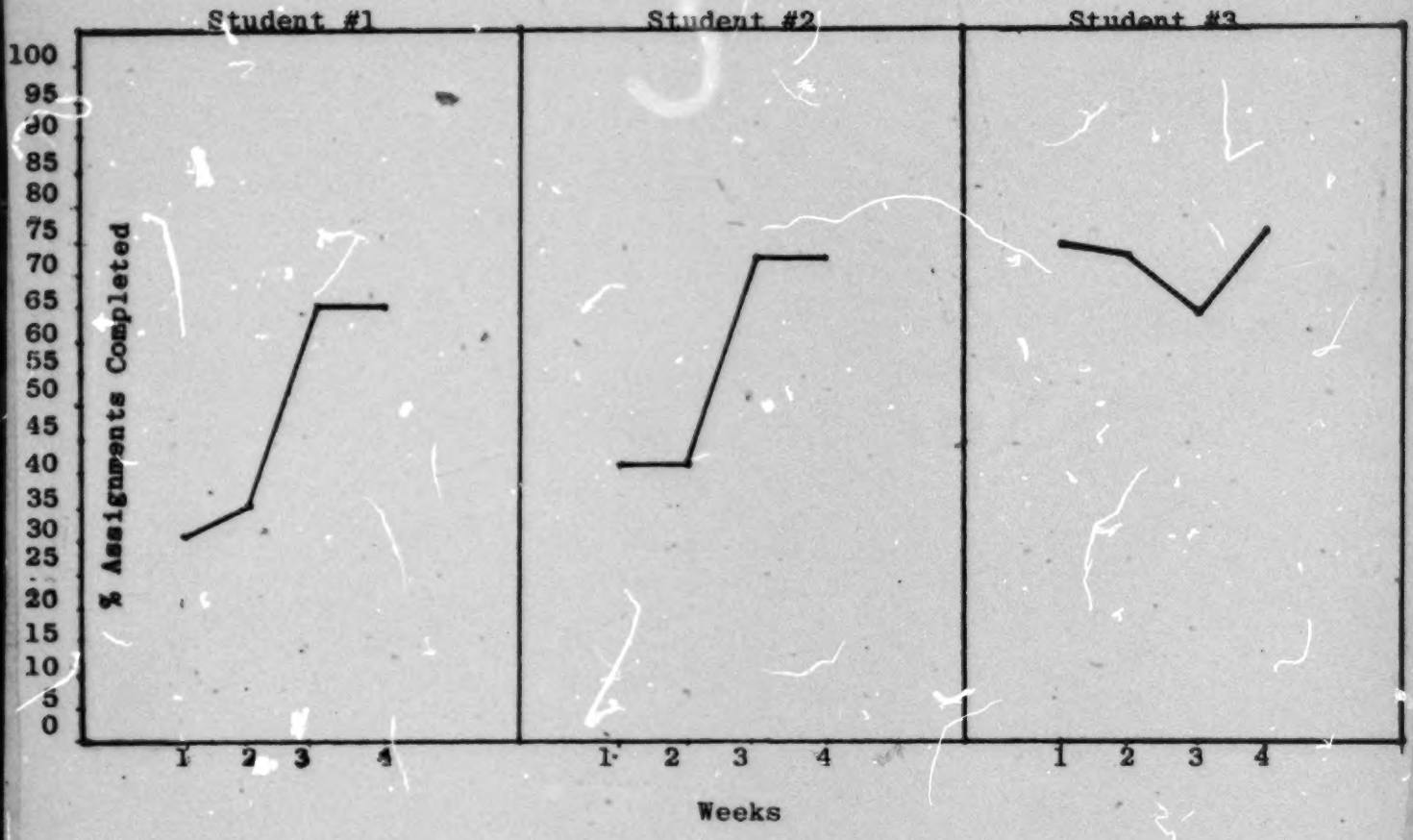
Table 1



Week 1	Baseline
Week 2	Training
Week 3	One week following training
Week 4	Two weeks following training